S90
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OIPE

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/954,679

DATE: 10/09/2001
TIME: 06:11:22

Input Set : A:\ES.txt
Output Set: N:\CRF3\10092001\I954679.raw

```
 3 <110> APPLICANT: Donna T. Ward
 4          Andrew T. Watt
 6 <120> TITLE OF INVENTION: ANTISENSE MODULATION OF RIBONUCLEASE L (2',5'-
OLIGOISOADENYLATE
 7          SYNTHETASE-DEPENDENT) EXPRESSION
 9 <130> FILE REFERENCE: RTS-0212
C--> 11 <140> CURRENT APPLICATION NUMBER: US/09/954,679
C--> 11 <141> CURRENT FILING DATE: 2001-09-12
 11 <160> NUMBER OF SEQ ID NOS: 88
 14 <210> SEQ ID NO: 1
 15 <211> LENGTH: 20
 16 <212> TYPE: DNA
 17 <213> ORGANISM: Artificial Sequence
 19 <220> FEATURE:
 21 <223> OTHER INFORMATION: Antisense Oligonucleotide
 23 <400> SEQUENCE: 1
 24 tccgtcatcg ctcctcaggg                                        20
 27 <210> SEQ ID NO: 2
 28 <211> LENGTH: 20
 29 <212> TYPE: DNA
 30 <213> ORGANISM: Artificial Sequence
 32 <220> FEATURE:
 34 <223> OTHER INFORMATION: Antisense Oligonucleotide
 36 <400> SEQUENCE: 2
 37 atgcattctg cccccaagga                                        20
 40 <210> SEQ ID NO: 3
 41 <211> LENGTH: 2928
 42 <212> TYPE: DNA
 43 <213> ORGANISM: Homo sapiens
 45 <220> FEATURE:
 47 <220> FEATURE:
 48 <221> NAME/KEY: CDS
 49 <222> LOCATION: (104)...(2329)
 51 <400> SEQUENCE: 3
 52 aatcccaact tacactcaaa gcttctttga ttaagtgcta ggagataaat ttgcattttc   60
 54 tcaaggaaaa ggctaaaagt ggtagcaggt ggcatttacc gtc atg gag agc agg   115
 55                                                  Met Glu Ser Arg
 56                                                   1
 58 gat cat aac aac ccc cag gag gga ccc acg tcc tcc agc ggt aga agg   163
 59 Asp His Asn Asn Pro Gln Glu Gly Pro Thr Ser Ser Ser Gly Arg Arg
 60   5               10                  15                  20
 62 gct gca gtg gaa gac aat cac ttg ctg att aaa gct gtt caa aac gaa   211
 63 Ala Ala Val Glu Asp Asn His Leu Leu Ile Lys Ala Val Gln Asn Glu
 64               25                  30                  35
 66 gat gtt gac ctg gtc cag caa ttg ctg gaa ggt gga gcc aat gtt aat   259
 67 Asp Val Asp Leu Val Gln Gln Leu Leu Glu Gly Gly Ala Asn Val Asn
 68               40                  45                  50
 70 ttc cag gaa gag gaa ggg ggc tgg aca cct ctg cat aac gca gta caa   307
```

```
71 Phe Gln Glu Glu Glu Gly Gly Trp Thr Pro Leu His Asn Ala Val Gln
72          55                   60                   65
74 atg agc agg gag gac att gtg gaa ctt ctg ctt cgt cat ggt gct gac    355
75 Met Ser Arg Glu Asp Ile Val Glu Leu Leu Leu Arg His Gly Ala Asp
76          70                   75                   80
78 cct gtt ctg agg aag aag aat ggg gcc acg cct ttt atc ctc gca gcg    403
79 Pro Val Leu Arg Lys Lys Asn Gly Ala Thr Pro Phe Ile Leu Ala Ala
80 85                   90                   95                  100
82 att gcg ggg agc gtg aag ctg ctg aaa ctt ttc ctt tct aaa gga gca    451
83 Ile Ala Gly Ser Val Lys Leu Leu Lys Leu Phe Leu Ser Lys Gly Ala
84              105                  110                  115
86 gat gtc aat gag tgt gat ttt tat ggc ttc aca gcc ttc atg gaa gcc    499
87 Asp Val Asn Glu Cys Asp Phe Tyr Gly Phe Thr Ala Phe Met Glu Ala
88              120                  125                  130
90 gct gtg tat ggt aag gtc aaa gcc cta aaa ttc ctt tat aag aga gga    547
91 Ala Val Tyr Gly Lys Val Lys Ala Leu Lys Phe Leu Tyr Lys Arg Gly
92              135                  140                  145
94 gca aat gtg aat ttg agg cga aag aca aag gag gat caa gag cgg ctg    595
95 Ala Asn Val Asn Leu Arg Arg Lys Thr Lys Glu Asp Gln Glu Arg Leu
96          150                  155                  160
98 agg aaa gga ggg gcc aca gct ctc atg gac gct gct gaa aaa gga cac    643
99 Arg Lys Gly Gly Ala Thr Ala Leu Met Asp Ala Ala Glu Lys Gly His
100 165                  170                  175                  180
102 gta gag gtc ttg aag att ctc ctt gat gag atg ggg gca gat gta aac   691
103 Val Glu Val Leu Lys Ile Leu Leu Asp Glu Met Gly Ala Asp Val Asn
104              185                  190                  195
106 gcc tgt gac aat atg ggc aga aat gcc ttg atc cat gct ctc ctg agc   739
107 Ala Cys Asp Asn Met Gly Arg Asn Ala Leu Ile His Ala Leu Leu Ser
108              200                  205                  210
110 tct gac gat agt gat gtg gag gct att acg cat ctg ctg ctg gac cat   787
111 Ser Asp Asp Ser Asp Val Glu Ala Ile Thr His Leu Leu Leu Asp His
112              215                  220                  225
114 ggg gct gat gtc aat gtg agg gga gaa aga ggg aag act ccc ctg atc   835
115 Gly Ala Asp Val Asn Val Arg Gly Glu Arg Gly Lys Thr Pro Leu Ile
116          230                  235                  240
118 ctg gca gtg gag aag aag cac ttg ggt ttg gtg cag agg ctt ctg gag   883
119 Leu Ala Val Glu Lys Lys His Leu Gly Leu Val Gln Arg Leu Leu Glu
120 245                  250                  255                  260
122 caa gag cac ata gag att aat gac aca gac agt gat ggc aaa aca gca   931
123 Gln Glu His Ile Glu Ile Asn Asp Thr Asp Ser Asp Gly Lys Thr Ala
124              265                  270                  275
126 ctg ctg ctt gct gtt gaa ctc aaa ctg aag aaa atc gcc gag ttg ctg   979
127 Leu Leu Leu Ala Val Glu Leu Lys Leu Lys Lys Ile Ala Glu Leu Leu
128              280                  285                  290
130 tgc aaa cgt gga gcc agt aca gat tgt ggg gat ctt gtt atg aca gcg   1027
131 Cys Lys Arg Gly Ala Ser Thr Asp Cys Gly Asp Leu Val Met Thr Ala
132          295                  300                  305
134 agg cgg aat tat gac cat tcc ctt gtg aag gtt ctt ctc tct cat gga   1075
135 Arg Arg Asn Tyr Asp His Ser Leu Val Lys Val Leu Leu Ser His Gly
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RAW SEQUENCE LISTING   DATE: 10/09/2001
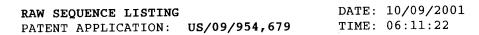PATENT APPLICATION: US/09/954,679   TIME: 06:11:22

Input Set : A:\ES.txt
Output Set: N:\CRF3\10092001\I954679.raw

```
136     310                    315                    320
138 gcc aaa gaa gat ttt cac cct cct gct gaa gac tgg aag cct cag agc   1123
139 Ala Lys Glu Asp Phe His Pro Pro Ala Glu Asp Trp Lys Pro Gln Ser
140 325                    330                    335                    340
142 tca cac tgg ggg gca gcc ctg aag gat ctc cac aga ata tac cgc cct   1171
143 Ser His Trp Gly Ala Ala Leu Lys Asp Leu His Arg Ile Tyr Arg Pro
144                    345                    350                    355
146 atg att ggc aaa ctc aag ttc ttt att gat gaa aaa tac aaa att gct   1219
147 Met Ile Gly Lys Leu Lys Phe Phe Ile Asp Glu Lys Tyr Lys Ile Ala
148                    360                    365                    370
150 gat act tca gaa gga ggc atc tac ctg ggg ttc tat gag aag caa gaa   1267
151 Asp Thr Ser Glu Gly Gly Ile Tyr Leu Gly Phe Tyr Glu Lys Gln Glu
152            375                    380                    385
154 gta gct gtg aag acg ttc tgt gag ggc agc cca cgt gca cag cgg gaa   1315
155 Val Ala Val Lys Thr Phe Cys Glu Gly Ser Pro Arg Ala Gln Arg Glu
156     390                    395                    400
158 gtc tct tgt ctg caa agc agc cga gag aac agt cac ttg gtg aca ttc   1363
159 Val Ser Cys Leu Gln Ser Ser Arg Glu Asn Ser His Leu Val Thr Phe
160 405                    410                    415                    420
162 tat ggg agt gag agc cac agg ggc cac ttg ttt gtg tgt gtc acc ctc   1411
163 Tyr Gly Ser Glu Ser His Arg Gly His Leu Phe Val Cys Val Thr Leu
164                    425                    430                    435
166 tgt gag cag act ctg gaa gcg tgt ttg gat gtg cac aga ggg gaa gat   1459
167 Cys Glu Gln Thr Leu Glu Ala Cys Leu Asp Val His Arg Gly Glu Asp
168                    440                    445                    450
170 gtg gaa aat gag gaa gat gaa ttt gcc cga aat gtc ctg tca tct ata   1507
171 Val Glu Asn Glu Glu Asp Glu Phe Ala Arg Asn Val Leu Ser Ser Ile
172            455                    460                    465
174 ttt aag gct gtt caa gaa cta cac ttg tcc tgt gga tac acc cac cag   1555
175 Phe Lys Ala Val Gln Glu Leu His Leu Ser Cys Gly Tyr Thr His Gln
176     470                    475                    480
178 gat ctg caa cca caa aac atc tta ata gat tct aag aaa gct gct cac   1603
179 Asp Leu Gln Pro Gln Asn Ile Leu Ile Asp Ser Lys Lys Ala Ala His
180 485                    490                    495                    500
182 ctg gca gat ttt gat aag agc atc aag tgg gct gga gat cca cag gaa   1651
183 Leu Ala Asp Phe Asp Lys Ser Ile Lys Trp Ala Gly Asp Pro Gln Glu
184            505                    510                    515
186 gtc aag aga gat cta gag gac ctt gga cgg ctg gtc ctc tat gtg gta   1699
187 Val Lys Arg Asp Leu Glu Asp Leu Gly Arg Leu Val Leu Tyr Val Val
188            520                    525                    530
190 aag aag gga agc atc tca ttt gag gat ctg aaa gct caa agt aat gaa   1747
191 Lys Lys Gly Ser Ile Ser Phe Glu Asp Leu Lys Ala Gln Ser Asn Glu
192            535                    540                    545
194 gag gtg gtt caa ctt tct cca gat gag gaa act aag gac ctc att cat   1795
195 Glu Val Val Gln Leu Ser Pro Asp Glu Glu Thr Lys Asp Leu Ile His
196     550                    555                    560
198 cgt ctc ttc cat cct ggg gaa cat gtg agg gac tgt ctg agt gac ctg   1843
199 Arg Leu Phe His Pro Gly Glu His Val Arg Asp Cys Leu Ser Asp Leu
200 565                    570                    575                    580
```

```
202 ctg ggt cat ccc ttc ttt tgg act tgg gag agc cgc tat agg acg ctt    1891
203 Leu Gly His Pro Phe Phe Trp Thr Trp Glu Ser Arg Tyr Arg Thr Leu
204             585             590             595
206 cgg aat gtg gga aat gaa tcc gac atc aaa aca cga aaa tct gaa agt    1939
207 Arg Asn Val Gly Asn Glu Ser Asp Ile Lys Thr Arg Lys Ser Glu Ser
208             600             605             610
210 gag atc ctc aga cta ctg caa cct ggg cct tct gaa cat tcc aaa agt    1987
211 Glu Ile Leu Arg Leu Leu Gln Pro Gly Pro Ser Glu His Ser Lys Ser
212         615             620             625
214 ttt gac aag tgg acg act aag att aat gaa tgt gtt atg aaa aaa atg    2035
215 Phe Asp Lys Trp Thr Thr Lys Ile Asn Glu Cys Val Met Lys Lys Met
216     630             635             640
218 aat aag ttt tat gaa aaa aga ggc aat ttc tac cag aac act gtg ggt    2083
219 Asn Lys Phe Tyr Glu Lys Arg Gly Asn Phe Tyr Gln Asn Thr Val Gly
220 645             650             655             660
222 gat ctg cta aag ttc atc cgg aat ttg gga gaa cac att gat gaa gaa    2131
223 Asp Leu Leu Lys Phe Ile Arg Asn Leu Gly Glu His Ile Asp Glu Glu
224             665             670             675
226 aag cat aaa aag atg aaa tta aaa att gga gac cct tcc ctg tat ttt    2179
227 Lys His Lys Lys Met Lys Leu Lys Ile Gly Asp Pro Ser Leu Tyr Phe
228             680             685             690
230 cag aag aca ttt cca gat ctg gtg atc tat gtc tac aca aaa cta cag    2227
231 Gln Lys Thr Phe Pro Asp Leu Val Ile Tyr Val Tyr Thr Lys Leu Gln
232         695             700             705
234 aac aca gaa tat aga aag cat ttc ccc caa acc cac agt cca aac aaa    2275
235 Asn Thr Glu Tyr Arg Lys His Phe Pro Gln Thr His Ser Pro Asn Lys
236     710             715             720
238 cct cag tgt gat gga gct ggt ggg gcc agt ggg ttg gcc agc cct ggg    2323
239 Pro Gln Cys Asp Gly Ala Gly Gly Ala Ser Gly Leu Ala Ser Pro Gly
240 725             730             735             740
242 tgc tga tggactgatt tgctggagtt cagggaacta cttattagct gtagagtcct    2379
243 Cys
246 tggcaaatca caacattctg ggccttttaa ctcaccaggt tgcttgtgag ggatgagttg    2439
248 catagctgat atgtcagtcc ctggcatcgt gtattccata tgtctataac aaaagcaata    2499
250 tatacccaga ctacactagt ccataagctt tacccactaa ctgggaggac attctgctaa    2559
252 gattcctttt gtcaattgca ccaaaagaat gagtgccttg accctaatg ctgcatatgt    2619
254 tacaattctc tcacttaatt ttcccaatga tcttgcaaaa cagggattat catccccatt    2679
256 taagaactga ggaacctgag actcagagag tgtgagctac tggcccaaga ttattcaatt    2739
258 tatacctagc actttataaa tttatgtggt gttattggta cctctcattt gggcacctta    2799
260 aaacttaact atcttccagg gctcttccag atgaggccca aaacatatat aggggttcca    2859
262 ggaatctcat tcattcattc agtatttatt gagcatctag tataagtctg ggcactggat    2919
264 gcatgaatt                                                            2928
267 <210> SEQ ID NO: 4
268 <211> LENGTH: 21
269 <212> TYPE: DNA
270 <213> ORGANISM: Artificial Sequence
272 <220> FEATURE:
274 <223> OTHER INFORMATION: PCR Primer
276 <400> SEQUENCE: 4
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RAW SEQUENCE LISTING   DATE: 10/09/2001
PATENT APPLICATION: US/09/954,679   TIME: 06:11:22

Input Set : A:\ES.txt
Output Set: N:\CRF3\10092001\I954679.raw

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277 ctgagtgacc tgctgggtca t                                          21
280 <210> SEQ ID NO: 5
281 <211> LENGTH: 21
282 <212> TYPE: DNA
283 <213> ORGANISM: Artificial Sequence
285 <220> FEATURE:
287 <223> OTHER INFORMATION: PCR Primer
289 <400> SEQUENCE: 5
290 tcggattcat ttcccacatt c                                          21
293 <210> SEQ ID NO: 6
294 <211> LENGTH: 28
295 <212> TYPE: DNA
296 <213> ORGANISM: Artificial Sequence
298 <220> FEATURE:
300 <223> OTHER INFORMATION: PCR Probe
302 <400> SEQUENCE: 6
303 tcctatagcg gctctcccaa gtccaaaa                                   28
306 <210> SEQ ID NO: 7
307 <211> LENGTH: 19
308 <212> TYPE: DNA
309 <213> ORGANISM: Artificial Sequence
311 <220> FEATURE:
313 <223> OTHER INFORMATION: PCR Primer
315 <400> SEQUENCE: 7
316 gaaggtgaag gtcggagtc                                             19
319 <210> SEQ ID NO: 8
320 <211> LENGTH: 20
321 <212> TYPE: DNA
322 <213> ORGANISM: Artificial Sequence
324 <220> FEATURE:
326 <223> OTHER INFORMATION: PCR Primer
328 <400> SEQUENCE: 8
329 gaagatggtg atgggatttc                                            20
332 <210> SEQ ID NO: 9
333 <211> LENGTH: 20
334 <212> TYPE: DNA
335 <213> ORGANISM: Artificial Sequence
337 <220> FEATURE:
339 <223> OTHER INFORMATION: PCR Probe
341 <400> SEQUENCE: 9
342 caagcttccc gttctcagcc                                            20
345 <210> SEQ ID NO: 10
346 <211> LENGTH: 447
347 <212> TYPE: DNA
348 <213> ORGANISM: Homo sapiens
350 <220> FEATURE:
353 <400> SEQUENCE: 10
354 cacgagggaa actgctcggg atgcaagcag tcttccaggc tttgcggttg ccacaggaat  60
356 aattgatacg tctgagttga gcaggtggaa tgtcaaaaaa ctgaaaacat tgttccttct 120
```

VERIFICATION SUMMARY   DATE: 10/09/2001
PATENT APPLICATION: **US/09/954,679**   TIME: 06:11:23

Input Set : **A:\ES.txt**
Output Set: **N:\CRF3\10092001\I954679.raw**

L:11 M:270 C: Current Application Number differs, Replaced Current Application No
L:11 M:271 C: Current Filing Date differs, Replaced Current Filing Date